

---

# Printed by EAST

---

**UserID:** ENave

**Computer:** WS05356

**Date:** 09/30/2000

**Time:** 21:30

## Document Listing

Document	Image pages	Text pages	Error pages
US 3848548 A	0	1	0
Total	0	1	0

DOCUMENT-IDENTIFIER: US 3848548 A  
TITLE: INCINERATION PROCESS FOR DISPOSAL OF WASTE PROPELLANT AND  
EXPLOSIVES

DEPR:

The waste material which can be incinerated in the process of  
this invention

includes all types of solid and liquid propellants and  
explosives.

Illustrative solid propellants which can be incinerated include  
single base

propellant, double base propellant, triple base propellant, high  
energy

propellant, rocket casting powder, cast propellant grains, rolled  
sheet

propellants, nitrocellulose, trinitrotoluene, inorganic oxidizers  
such as

ammonium perchlorate, ammonium nitrate; organic oxidizers such as  
HMX

(cyclotetramethylenetetranitraamine), RDX

(cyclotrimethylenetrinitraamine), and

the like. Illustrative waste liquid propellants and explosives  
which can be

incinerated in the process of this invention included nitrate  
esters such as

nitroglycerin, diethyleneglycol dinitrate, triethylene glycol  
dinitrate, and

the like.

CCOR:

588/203

CCXR:

588/216

CCXR:

588/220

---

# Printed by EAST

---

**UserID:** ENave

**Computer:** WS05356

**Date:** 09/30/2000

**Time:** 21:37

	Type	L #	Hits	Search Text	DBs	Time Stamp	C o m m e n t s	E r r o r C o n d i t i o n	E r r o r s
1	BRS	L1	40	588/\$.ccls. and (rocket same propellant)	USPAT	2000/09/30 21:30		n	0
2	BRS	L2	12	((110/\$.CCLS.) AND (ROCKET SAME PROPELLANT))	USPAT	2000/09/30 21:30			0

---

# Printed by EAST

---

**UserID:** ENave

**Computer:** WS05356

**Date:** 09/30/2000

**Time:** 21:12

## Document Listing

Document	Image pages	Text pages	Error pages
US 5881654 A	0	1	0
Total	0	1	0

DOCUMENT-IDENTIFIER: US 5881654 A

TITLE: Combustion apparatus for highly energetic materials

BSPR:

During the production of rocket fuel, gun propellants, explosive devices and pyrotechnic devices, various waste materials are generated which must be destroyed, typically by combustion, or otherwise disposed of in an environmentally acceptable manner. Combustion of many of these materials occurs extremely rapidly generating large volumes of toxic waste gas products which must be treated before release to the environment. While many of these materials can be burned without detonation, there almost always is a risk that detonation may occur. Because of the potential for transition of the waste materials from controlled burning to uncontrolled detonation and the tremendous volume of exhaust gas products produced during combustion in a very short time, current practice is to ignite the waste material in an open container so that the exhaust gas products from the combustion are simply exhausted into the atmosphere. Even though the exhaust gas products may contain unburned waste and particulate materials as well as hazardous or toxic components, open container burning of such waste materials has been an acceptable procedure due to the possibility of transition to detonation. However, open burning of these materials is environmentally undesirable and pressure for acceptable alternatives is building.

CCXR:

588/202

---

# Printed by EAST

---

**UserID:** ENave

**Computer:** WS05356

**Date:** 09/30/2000

**Time:** 21:07

## Document Listing

Document	Image pages	Text pages	Error pages
US 6101957 A	0	1	0
Total	0	1	0

DOCUMENT-IDENTIFIER: US 6101957 A

TITLE: Apparatus for after-burning fuel rich rocket exhaust products

DEPR:

Gases generated from the Shillelagh missile were sampled and the exhaust

products of the multistep nozzle were analyzed. It was determined that 95% of

the hydrogen emitted from the two solid propellant grains was destroyed in

apparatus 6, and 45% of the carbon monoxide products from the Shillelagh rocket

motor were destroyed in apparatus 6.

CCXR:

588/202